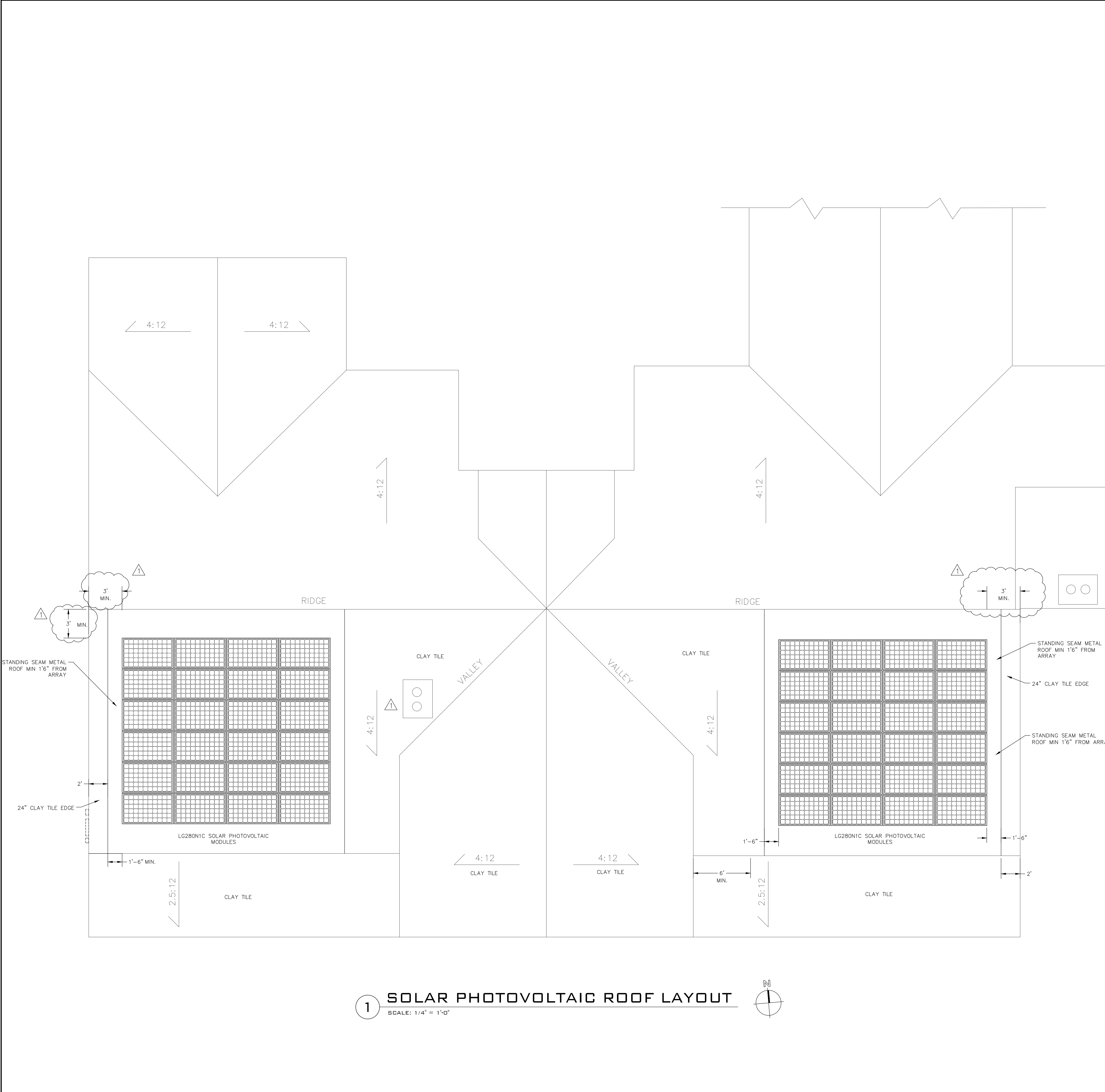


THE USE OF THESE DRAWINGS AND SPECIFICATIONS BEGINS WITH THE ISSUANCE OF THESE DRAWINGS AND SPECIFICATIONS. NO OTHER DRAWINGS OR SPECIFICATIONS SHALL BE USED. ANY CHANGES TO THESE DRAWINGS OR SPECIFICATIONS SHALL BE MADE IN WRITING AND BY THE ENGINEER. ANY CHANGES TO THESE DRAWINGS OR SPECIFICATIONS SHALL BE MADE IN WRITING AND BY THE ENGINEER. ANY CHANGES TO THESE DRAWINGS OR SPECIFICATIONS SHALL BE MADE IN WRITING AND BY THE ENGINEER.



### SHEET NOTES

- PV modules shall be mounted all in the same plane. Maximum allowable difference between finished height of any two adjacent PV modules is 1/16\"
- All conduits shall be routed inside the building between the roof and the finished ceiling and in the walls except where noted, or not practical.
- PV Contractor shall coordinate with the General Contractor on the location of roof penetrations (flashings by others). Standard module output wiring shall be extended when necessary with additional lengths of USE-2 wire which has an MC connector crimped on to one end. All crimping of MC connectors shall be performed with a certified MC connector crimping tool.
- All PV output wiring shall be routed through a roof jack and directly into a transition box mounted on the ceiling just beneath the array. See sheet M2.5 for wiring detail.
- All PV array wiring, conduit, transition boxes, and grounding conductors shall be carefully secured and hidden beneath PV modules such that no wiring, conduit, or boxes are visible from the exterior of the building.
- Exact numbering and field labeling on PV strings, batteries, and inverters may be altered in the field to best match the physical layout. Submit proposed changes to Architect or Engineer.
- The array support structure shall be made common with all PV module frames. All PV array equipment grounds shall be made common with the local ground rod per the requirements of NEC ART. 250. Ground wires from roof are oversized for surge protection.
- All above ground conduit shall be EMT or rigid metal conduit. Contractor shall verify conduit type with general contractor prior to installation. Flexible metallic and non-metallic conduit is only permitted when the location has been approved by the engineer.
- PV system point of interconnection per NEC 690.64 (b). PV backfeed disconnect shall be mounted in a location which is easily accessible by PG&E personnel.
- Approximate PV array string layout is indicated per plans. However, PV Contractor shall provide engineer with shading measurements from the field and a proposed alternate stringing arrangement if necessary once array mounting structure has been built. Approval is required on final PV module string layout plan.
- Load breakers are generally not shown in electrical panels on this sheet. See Electrical Drawings for panel schedules. All panels shall include a main breaker and the main breaker shall be physically located at the opposite end of the bus from all other breakers which can feed power to the same bus (like all PV breakers, etc.). All single direction load breakers shall be located between the main breaker and the other backfeed breakers in order to minimize overall bus loading.
- Ground terminal inside all inverters for each array shall be connected to the equipment grounding system in the new location which is connected to ground wires which run back to the grounding systems at the point of interconnection. Ground wires to roof are oversized for surge protection. All equipment shall be properly grounded per the requirements of NEC ART. 250.
- When applicable a PV AC combiner panel shall not be used to service any on site loads. The neutral bus in this panel shall only be used for instrumentation, voltage or phase detection per NEC 690.62 Neutral Downsizing Allowance. A permanent warning label shall be applied to the PV combiner panels with the following or equivalent marking:  
**WARNING: SOLAR PHOTOVOLTAIC SYSTEM EQUIPMENT ONLY. DO NOT CONNECT LOAD BREAKERS TO THIS PANEL.**
- PV contractor shall coordinate with electrical contractor on all PV work that interfaces with such equipment.
- Electrical Contractor shall size service panels, distribution panels, and panel bussing.
- All wires shall be marked on each end for unique identification.
- Run any metallic conduit located in attic along the bottom of load bearing members, to the maximum extent possible.

### MonoX™ NeoN

LG280N1C

Mechanical Properties	Electrical Properties (STC)*
Cells: 6 x 30	Maximum power (Pmp) 280 W
Cell vendor: LG	MPP voltage (Vmpp) 31.5
Cell type: Monocrystalline	MPP current (Impp) 8.97
Cell dimensions: 156 x 156 mm <sup>2</sup> / 6 x 6 in <sup>2</sup>	Open circuit voltage (Voc) 38.9
# of busbar: 3	Short circuit current (Isc) 9.56
Dimensions (L x W x H): 645.7 x 39.37 x 1.38 in	Module efficiency (%) 17.1
Static snow load: 5400 Pa / 113 psf	Operating temperature (°C) -40 ~ +90
Static wind load: 2400 Pa / 50 psf	Maximum system voltage (V) 600 (UL), 1000 (IEC)
Weight: 16.8 x 0.5 kg / 36.96 x 1.1 lb	Maximum series fuse rating (A) 15
Connector type: MC4 connector IP 67	Power tolerance (%) 0 ~ +3
Junction box: IP 67 with 3 bypass diodes	
Length of cables: 2 x 1000 mm / 2 x 39.37 in	
Frame: Anodized aluminum	

Certifications and Warranty	Electrical Properties (NOCT)*
Certifications: IEC 61215, IEC 61730-1/-2, UL 1703, ISO 9001, IEC 61701 (in progress), (UL-G-Fokus Test "Non-destructive") (in progress)	Maximum power (Pmp) 280 W
Product warranty: 10 years	MPP voltage (Vmpp) 29.6
Output warranty of Pmax: Linear warranty <sup>1</sup>	MPP current (Impp) 28.8
	MPP current (Impp) 715
	Open circuit voltage (Voc) 35.9
	Short circuit current (Isc) 770
	Efficiency reduction (from 1000 W/m <sup>2</sup> to 200 W/m <sup>2</sup> ) < 4.5 %

Temperature Coefficients	Dimensions (mm/in)
NOCT: 45 ± 2 °C	
Pmp: -0.42 %/K	
Voc: -0.33 %/K	
Isc: 0.03 %/K	

### Characteristic Curves

REVISIONS: BY:

05/21/13	MEG
08/08/13	MEG

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CARMEL VALLEY, CA 93924

**SOLAR PHOTOVOLTAIC**  
**ROOF LAYOUT**

DATE: 07/21/15  
SCALE: AS NOTED  
DRAWN: MEG  
CHECKED:  
CHECKED:  
FILE NAME:

SHEET:  
**PV2.1**  
SHEET OF SHEETS